SEQUENCE LISTING

<120> MAMMALIAN PRO-APOPTOTIC BOK GENES AND
THEIR USES

<130> STAN072CON

<140> 09/682,667
<141> 2001-10-04

<150> 09/517,358
<151> 2000-03-02

<150> 09/186,250
<151> 1998-11-04

<150> 60/064,943
<151> 1997-11-07

<160> 18

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 642
<212> DNA
<213> r. rattus

<400> 1
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tcgcccacag acaaggagct ggtggcccag gctaaagcac taggccggga gtacgtgcac     120
gcgcggcttt tgcgcgccgg cctctcctgg agcgctccag agcgtgcctc gcctgcccct     180
ggaggacgcc tggcagaggt gtgcaccgtg ctgctgcgct gggagatga gctggagcag     240
atccgtccca gcgtatatcg gaatgtggcc cggcagctgc acatccccct gcagtctgag     300
cctgtggtga ctgatgcctt cctcgctgtg gccggccaca tcttctcagc aggtatcaca     360
tggggcaagg tagtgtccct gtactcggtg gctgcgggac tagcggtgga ctgcgtccgg     420
caagctcagc cagccatggt tcatgccctg gttgactgcc tgggggaatt tgtacgcaag     480
accctggcca cctggcttcg gaggcgtggt ggatggacgg acgtcctcaa gtgtgtggtc     540
agcacagacc ctggcttccg ctcccactgg ctcgtggcca cactctgcag ctttggccgc     600
ttcctgaagg ctgcattctt cctcctgttg ccagagagat ga                        642
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<210> 2
<211> 213
<212> PRT
<213> r. rattus

<400> 2
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Met Glu Val Leu Arg Arg Ser Ser Val Phe Ala Ala Glu Ile Met Asp
 1               5                  10                  15
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Ala Phe Asp Arg Ser Pro Thr Asp Lys Glu Leu Val Ala Gln Ala Lys
         20                      25                      30
Ala Leu Gly Arg Glu Tyr Val His Ala Arg Leu Leu Arg Ala Gly Leu
         35                      40                      45
Ser Trp Ser Ala Pro Glu Arg Ala Ser Pro Ala Pro Gly Gly Arg Leu
    50                      55                      60
Ala Glu Val Cys Thr Val Leu Leu Arg Leu Gly Asp Glu Leu Glu Gln
65                      70                      75                      80
Ile Arg Pro Ser Val Tyr Arg Asn Val Ala Arg Gln Leu His Ile Pro
                 85                      90                      95
Leu Gln Ser Glu Pro Val Val Thr Asp Ala Phe Leu Ala Val Ala Gly
             100                     105                     110
His Ile Phe Ser Ala Gly Ile Thr Trp Gly Lys Val Val Ser Leu Tyr
         115                     120                     125
Ser Val Ala Ala Gly Leu Ala Val Asp Cys Val Arg Gln Ala Gln Pro
    130                     135                     140
Ala Met Val His Ala Leu Val Asp Cys Leu Gly Glu Phe Val Arg Lys
145                     150                 155                     160
Thr Leu Ala Thr Trp Leu Arg Arg Arg Gly Gly Trp Thr Asp Val Leu
                 165                     170                     175
Lys Cys Val Val Ser Thr Asp Pro Gly Phe Arg Ser His Trp Leu Val
             180                     185                     190
Ala Thr Leu Cys Ser Phe Gly Arg Phe Leu Lys Ala Ala Phe Phe Leu
         195                     200                     205
Leu Leu Pro Glu Arg
    210


<210> 3
<211> 513
<212> DNA
<213> r.rattus

<220>
<221> CDS
<222> (1)...(513)

<400> 3
atg gag gtg ctg cgg cgc tct tct gtc ttc gct gcg gag atc atg gac      48
Met Glu Val Leu Arg Arg Ser Ser Val Phe Ala Ala Glu Ile Met Asp
 1               5                      10                      15


gcc ttt gat cgc tcg ccc aca gac aag gag ctg gtg gcc cag gct aaa      96
Ala Phe Asp Arg Ser Pro Thr Asp Lys Glu Leu Val Ala Gln Ala Lys
             20                      25                      30


gca cta ggc cgg gag tac gtg cac gcg cgg ctt ttg cgc gcc ggc ctc     144
Ala Leu Gly Arg Glu Tyr Val His Ala Arg Leu Leu Arg Ala Gly Leu
             35                      40                      45


tcc tgg agc gct cca gag cgt gcc tcg cct gcc cct gga gga cgc ctg     192
Ser Trp Ser Ala Pro Glu Arg Ala Ser Pro Ala Pro Gly Gly Arg Leu
    50                      55                      60
```

2

```
gca gag gtg tgc acc gtg ctg ctg cgc ttg gga atc aca tgg ggc aag        240
Ala Glu Val Cys Thr Val Leu Leu Arg Leu Gly Ile Thr Trp Gly Lys
 65              70              75              80

gta gtg tcc ctg tac tcg gtg gct gcg gga cta gcg gtg gac tgc gtc        288
Val Val Ser Leu Tyr Ser Val Ala Ala Gly Leu Ala Val Asp Cys Val
                85              90              95

cgg caa gct cag cca gcc atg gtt cat gcc ctg gtt gac tgc ctg ggg        336
Arg Gln Ala Gln Pro Ala Met Val His Ala Leu Val Asp Cys Leu Gly
            100             105             110

gaa ttt gta cgc aag acc ctg gcc acc tgg ctt cgg agg cgt ggt gga        384
Glu Phe Val Arg Lys Thr Leu Ala Thr Trp Leu Arg Arg Arg Gly Gly
            115             120             125

tgg acg gac gtc ctc aag tgt gtg gtc agc aca gac cct ggc ttc cgc        432
Trp Thr Asp Val Leu Lys Cys Val Val Ser Thr Asp Pro Gly Phe Arg
            130             135             140

tcc cac tgg ctc gtg gcc aca ctc tgc agc ttt ggc cgc ttc ctg aag        480
Ser His Trp Leu Val Ala Thr Leu Cys Ser Phe Gly Arg Phe Leu Lys
145             150             155             160

gct gca ttc ttc ctc ctg ttg cca gag aga tga                           513
Ala Ala Phe Phe Leu Leu Leu Pro Glu Arg *
            165             170
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<210> 4
<211> 170
<212> PRT
<213> r.rattus

<400> 4

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Met Glu Val Leu Arg Arg Ser Ser Val Phe Ala Ala Glu Ile Met Asp
 1               5               10              15
Ala Phe Asp Arg Ser Pro Thr Asp Lys Glu Leu Val Ala Gln Ala Lys
            20              25              30
Ala Leu Gly Arg Glu Tyr Val His Ala Arg Leu Leu Arg Ala Gly Leu
            35              40              45
Ser Trp Ser Ala Pro Glu Arg Ala Ser Pro Ala Pro Gly Gly Arg Leu
            50              55              60
Ala Glu Val Cys Thr Val Leu Leu Arg Leu Gly Ile Thr Trp Gly Lys
 65              70              75              80
Val Val Ser Leu Tyr Ser Val Ala Ala Gly Leu Ala Val Asp Cys Val
                85              90              95
Arg Gln Ala Gln Pro Ala Met Val His Ala Leu Val Asp Cys Leu Gly
            100             105             110
Glu Phe Val Arg Lys Thr Leu Ala Thr Trp Leu Arg Arg Arg Gly Gly
            115             120             125
Trp Thr Asp Val Leu Lys Cys Val Val Ser Thr Asp Pro Gly Phe Arg
            130             135             140
Ser His Trp Leu Val Ala Thr Leu Cys Ser Phe Gly Arg Phe Leu Lys
```

```
145                  150                 155                      160
Ala Ala Phe Phe Leu Leu Leu Pro Glu Arg
                165                 170
```

<210> 5
<211> 642
<212> DNA
<213> H.sapiens

<220>
<221> CDS
<222> (1)...(642)

<400> 5

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atg gag gtg ctg cgg cgc tct tcg gtc ttc gct gcg gag atc atg gac      48
Met Glu Val Leu Arg Arg Ser Ser Val Phe Ala Ala Glu Ile Met Asp
 1               5                   10                  15

gcc ttt gat cgc tgg ccc aca gac aag gag ctg gtg gcc cag gct aaa      96
Ala Phe Asp Arg Trp Pro Thr Asp Lys Glu Leu Val Ala Gln Ala Lys
            20                  25                  30

gca cta ggc cgg gag tac gtg cac gcg cgg ctt ttg cgc gcc ggc ctc     144
Ala Leu Gly Arg Glu Tyr Val His Ala Arg Leu Leu Arg Ala Gly Leu
        35                  40                  45

tcc tgg agc gct cca gag cgt gcc tcg cct gcc cct gga gga cgc ctg     192
Ser Trp Ser Ala Pro Glu Arg Ala Ser Pro Ala Pro Gly Gly Arg Leu
    50                  55                  60

gca gag gtg tgc acc gtg ctg ctg cgc ttg gga gat gag ctg gag cag     240
Ala Glu Val Cys Thr Val Leu Leu Arg Leu Gly Asp Glu Leu Glu Gln
 65                  70                  75                  80

atc cgt ccc agc gta tat cgg aat gtg gcc cgg cag ctg cac atc cct     288
Ile Arg Pro Ser Val Tyr Arg Asn Val Ala Arg Gln Leu His Ile Pro
                85                  90                  95

ctg cag tct gag cct gtg gtg act gat gcc ttc ctc gct gtg gcc ggc     336
Leu Gln Ser Glu Pro Val Val Thr Asp Ala Phe Leu Ala Val Ala Gly
            100                 105                 110

cac atc ttc tca gca ggt atc aca tgg ggc aag gta gtg tcc ctg tac     384
His Ile Phe Ser Ala Gly Ile Thr Trp Gly Lys Val Val Ser Leu Tyr
        115                 120                 125

tcg gcg gct gcg gga cta gcg gtg gac tgc gtc cgg caa gct cag cca     432
Ser Ala Ala Ala Gly Leu Ala Val Asp Cys Val Arg Gln Ala Gln Pro
    130                 135                 140

gcc atg gtt cat gcc ctg gtt gac tgc ctg ggg gaa ttt gta cgc aag     480
Ala Met Val His Ala Leu Val Asp Cys Leu Gly Glu Phe Val Arg Lys
145                 150                 155                 160
```

```
acc ttg gct acc tgg ctt cgg agg cgt ggt gga tgg acg gac gtc ctc      528
Thr Leu Ala Thr Trp Leu Arg Arg Arg Gly Gly Trp Thr Asp Val Leu
            165                 170             175

aag tgt gtg gtc agc aca aaa cct ggc ttc cgc tcc cac tgg ctc gtg      576
Lys Cys Val Val Ser Thr Lys Pro Gly Phe Arg Ser His Trp Leu Val
            180                 185             190

gcc aca ctc tgc agc ttt ggc cgc ttc ctg aag gct gca ttc ttc ctc      624
Ala Thr Leu Cys Ser Phe Gly Arg Phe Leu Lys Ala Ala Phe Phe Leu
            195                 200             205

ctg ttg cca gag aga tga                                              642
Leu Leu Pro Glu Arg  *
    210
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<210> 6
<211> 213
<212> PRT
<213> H.sapiens

<400> 6
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Met Glu Val Leu Arg Arg Ser Ser Val Phe Ala Ala Glu Ile Met Asp
  1               5                  10                  15
Ala Phe Asp Arg Trp Pro Thr Asp Lys Glu Leu Val Ala Gln Ala Lys
            20                  25                  30
Ala Leu Gly Arg Glu Tyr Val His Ala Arg Leu Leu Arg Ala Gly Leu
            35                  40                  45
Ser Trp Ser Ala Pro Glu Arg Ala Ser Pro Ala Pro Gly Gly Arg Leu
    50                  55                  60
Ala Glu Val Cys Thr Val Leu Leu Arg Leu Gly Asp Glu Leu Glu Gln
65                  70                  75                  80
Ile Arg Pro Ser Val Tyr Arg Asn Val Ala Arg Gln Leu His Ile Pro
                85                  90                  95
Leu Gln Ser Glu Pro Val Val Thr Asp Ala Phe Leu Ala Val Ala Gly
            100                 105                 110
His Ile Phe Ser Ala Gly Ile Thr Trp Gly Lys Val Val Ser Leu Tyr
            115                 120                 125
Ser Ala Ala Ala Gly Leu Ala Val Asp Cys Val Arg Gln Ala Gln Pro
    130                 135                 140
Ala Met Val His Ala Leu Val Asp Cys Leu Gly Glu Phe Val Arg Lys
145                 150                 155                 160
Thr Leu Ala Thr Trp Leu Arg Arg Arg Gly Gly Trp Thr Asp Val Leu
            165                 170                 175
Lys Cys Val Val Ser Thr Lys Pro Gly Phe Arg Ser His Trp Leu Val
            180                 185                 190
Ala Thr Leu Cys Ser Phe Gly Arg Phe Leu Lys Ala Ala Phe Phe Leu
            195                 200                 205
Leu Leu Pro Glu Arg
    210
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<210> 7
<211> 513
<212> DNA
<213> H. sapiens

<220>
<221> CDS
<222> (1)...(513)

<400> 7
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atg gag gtg ctg cgg cgc tct tcg gtc ttc gct gcg gag atc atg gac        48
Met Glu Val Leu Arg Arg Ser Ser Val Phe Ala Ala Glu Ile Met Asp
 1               5                   10                  15

gcc ttt gat cgc tgg ccc aca gac aag gag ctg gtg gcc cag gct aaa        96
Ala Phe Asp Arg Trp Pro Thr Asp Lys Glu Leu Val Ala Gln Ala Lys
                20                  25                  30

gca cta ggc cgg gag tac gtg cac gcg cgg ctt ttg cgc gcc ggc ctc       144
Ala Leu Gly Arg Glu Tyr Val His Ala Arg Leu Leu Arg Ala Gly Leu
            35                  40                  45

tcc tgg agc gct cca gag cgt gcc tcg cct gcc cct gga gga cgc ctg       192
Ser Trp Ser Ala Pro Glu Arg Ala Ser Pro Ala Pro Gly Gly Arg Leu
        50                  55                  60

gca gag gtg tgc acc gtg ctg ctg cgc ttg gga atc aca tgg ggc aag       240
Ala Glu Val Cys Thr Val Leu Leu Arg Leu Gly Ile Thr Trp Gly Lys
 65                  70                  75                  80

gta gtg tcc ctg tac tcg gcg gct gcg gga cta gcg gtg gac tgc gtc       288
Val Val Ser Leu Tyr Ser Ala Ala Ala Gly Leu Ala Val Asp Cys Val
                85                  90                  95

cgg caa gct cag cca gcc atg gtt cat gcc ctg gtt gac tgc ctg ggg       336
Arg Gln Ala Gln Pro Ala Met Val His Ala Leu Val Asp Cys Leu Gly
                100                 105                 110

gaa ttt gta cgc aag acc ttg gct acc tgg ctt cgg agg cgt ggt gga       384
Glu Phe Val Arg Lys Thr Leu Ala Thr Trp Leu Arg Arg Arg Gly Gly
            115                 120                 125

tgg acg gac gtc ctc aag tgt gtg gtc agc aca aaa cct ggc ttc cgc       432
Trp Thr Asp Val Leu Lys Cys Val Val Ser Thr Lys Pro Gly Phe Arg
        130                 135                 140

tcc cac tgg ctc gtg gcc aca ctc tgc agc ttt ggc cgc ttc ctg aag       480
Ser His Trp Leu Val Ala Thr Leu Cys Ser Phe Gly Arg Phe Leu Lys
145                 150                 155                 160

gct gca ttc ttc ctc ctg ttg cca gag aga tga                          513
Ala Ala Phe Phe Leu Leu Leu Pro Glu Arg *
                165                 170
```

<210> 8
<211> 170
<212> PRT
<213> H. sapiens

<400> 8
Met Glu Val Leu Arg Arg Ser Ser Val Phe Ala Ala Glu Ile Met Asp
1   5   10   15
Ala Phe Asp Arg Trp Pro Thr Asp Lys Glu Leu Val Ala Gln Ala Lys
            20   25   30
Ala Leu Gly Arg Glu Tyr Val His Ala Arg Leu Leu Arg Ala Gly Leu
        35   40   45
Ser Trp Ser Ala Pro Glu Arg Ala Ser Pro Ala Pro Gly Gly Arg Leu
    50   55   60
Ala Glu Val Cys Thr Val Leu Leu Arg Leu Gly Ile Thr Trp Gly Lys
65   70   75   80
Val Val Ser Leu Tyr Ser Ala Ala Ala Gly Leu Ala Val Asp Cys Val
                85   90   95
Arg Gln Ala Gln Pro Ala Met Val His Ala Leu Val Asp Cys Leu Gly
            100   105   110
Glu Phe Val Arg Lys Thr Leu Ala Thr Trp Leu Arg Arg Arg Gly Gly
            115   120   125
Trp Thr Asp Val Leu Lys Cys Val Val Ser Thr Lys Pro Gly Phe Arg
    130   135   140
Ser His Trp Leu Val Ala Thr Leu Cys Ser Phe Gly Arg Phe Leu Lys
145   150   155   160
Ala Ala Phe Phe Leu Leu Leu Pro Glu Arg
                165   170

<210> 9
<211> 12
<212> PRT
<213> R. rattus

<400> 9
Leu Leu Arg Leu Gly Asp Glu Leu Glu Gln Ile Arg
1   5   10

<210> 10
<211> 12
<212> PRT
<213> H. sapiens

<400> 10
Leu Leu Arg Leu Gly Ile Thr Trp Gly Lys Val Val
1   5   10

<210> 11
<211> 13
<212> PRT
<213> Artificial Sequence

7

<220>
<223> Consensus motif

<400> 11
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 1   5   10

<210> 12
<211> 4
<212> PRT
<213> H. sapiens

<400> 12
Thr Trp Gly Lys
 1

<210> 13
<211> 4
<212> PRT
<213> H. sapiens

<400> 13
Asn Trp Gly Arg
 1

<210> 14
<211> 3
<212> PRT
<213> H. sapiens

<400> 14
Gly Asp Glu
 1

<210> 15
<211> 24
<212> PRT
<213> H. sapiens

<400> 15
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 1   5   10   15
Asn Trp Gly Arg Val Val Ala Leu
            20

<210> 16
<211> 24
<212> PRT
<213> H. sapiens

<400> 16
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1   5   10   15
Asn Trp Gly Arg Val Val Ala Leu
            20

<210> 17
<211> 13
<212> PRT
<213> H. sapiens

<400> 17
Leu Arg Arg Ile Gly Asn Phe Asn Trp Gly Arg Val Val
1   5   10

<210> 18
<211> 12
<212> PRT
<213> H. sapiens

<400> 18
Leu Ala Ile Ile Gly Ile Asn Trp Gly Arg Val Val
1   5   10